

C. Amendments to the Claims

Please amend the claims where indicated:

Cancel claims 4, 6, 8-11, 13-14, 16, 34 and 39 without prejudice or disclaimer.

1. (currently amended) A purified leptin peptide ≤ 15 amino acids long, having a sequence selected from the group consisting of SEQ ID NOS: 2-10 and 18, ~~and fragments, homologs, analogs and derivatives thereof which retain activity of the native sequence,~~ wherein said peptide ~~has the following characteristics:~~
- (a) — it is a substantially homogenous preparation; and
 - (b) — it has at least 80% homology to any one of the sequences of SEQ ID NOS: 2-10 and 18, and
 - (c) — said purified leptin peptide modulates body mass.
2. (originally presented) The leptin peptide of claim 1, wherein the leptin peptide does not bind to the leptin receptor.
3. (originally presented) The leptin peptide of claim 1, wherein the leptin peptide can cross the blood brain barrier.

Claim 4 (canceled)

5. (withdrawn)

Claim 6 (canceled)

7. (currently amended) The A purified peptide of claim 1, wherein the peptide which is an OB-3 peptide selected from the group consisting of: amino acid residues ¹¹⁶Ser-Cys-Ser-Leu-Pro-Gln-Thr¹²² of mouse leptin protein (SEQ ID NO:2) and ¹¹⁶Ser-Cys-His-Leu-Pro-Trp-Ala¹²² of human leptin protein (SEQ ID NO:18), ~~and fragments, derivative, homologs and analogs thereof.~~

Claims 8-11 (canceled)

12. (currently amended) A peptide consisting essentially of an amino acid sequence of the ~~leptin protein of any one of SEQ ID NOS:1 and 17, and~~ selected from the group consisting of:
- (i) ~~a sequence comprising~~ amino acids 21-35 (SEQ ID NO:3);
 - (ii) ~~a sequence comprising~~ amino acids 31-45 (SEQ ID NO:4);
 - (iii) ~~a sequence comprising~~ amino acids 41-55 (SEQ ID NO:5);
 - (iv) ~~a sequence comprising~~ amino acids 51-65 (SEQ ID NO:6);

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- (v) ~~a sequence comprising~~ amino acids 61-75 (SEQ ID NO:7);
- (vi) ~~a sequence comprising~~ amino acids 71-85 (SEQ ID NO:8);
- (vii) ~~a sequence comprising~~ amino acids 81-95 (SEQ ID NO:9);
- (viii) ~~a sequence comprising~~ amino acids 91-105 (SEQ ID NO:10);
- (ix) ~~a sequence comprising~~ mouse amino acids 116-122 (SEQ ID NO:2); and
- (x) ~~a sequence comprising~~ human amino acids 116-122 (SEQ ID NO:18);

~~and fragments, derivatives, homologs and analogs thereof.~~

Claims 13-14 (canceled)

- 15. (currently amended) The leptin peptide of claim 7, and variants thereof, with having conservative amino acid substitutions.
- 16. (canceled)
- 17. (originally presented) The leptin peptide of claim 15, wherein the conservative amino acid substitutions represent a single amino acid substitution in the mature sequence, wherein the both the substituted and replacement amino acids are non-cyclic. No A.B.
- 18. (previously amended) A composition comprising the leptin peptide of claim 1, and a pharmaceutically acceptable carrier.

D Claims 19-30. (canceled)

- 31. (previously amended) The peptide of claim 1, wherein the peptide contains at least one D-amino acid substitution.
- 32. (previously amended) The peptide of claim 1, wherein the peptide contains at least one variant amino acid substitution selected from the group comprising C_α-methylamino acids, N_α-methylamino acids and α,β-unsaturated amino acids.
- 33. (previously amended) The peptide of claim 1, wherein the peptide is cyclized.

Claim 34 (canceled)

- ~~34. (previously amended) A linear coupled peptide having at least two peptides derived from discontinuous regions of the full length leptin protein of SEQ ID NOS:1 or 17, wherein at least one of the coupled peptides is a peptide according to claim 1.~~

Claims 35-42. (canceled)

Claims 43-44. (withdrawn)

Claim 45. (canceled)

Claims 46-47. (withdrawn)

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Claims 46-47. (withdrawn)

Claim 48. (Canceled)

Claims 49-55. (Withdrawn)

Claim 56. (Canceled)

Claims 57-60. (Withdrawn)

61. (currently amended) A purified peptide comprising consisting essentially of the amino acid residue sequence of SEQ ID NO:18.
